

Michigan Diabetes Strategic Plan

**October, 2003
Michigan Department of Community Health**

October 7, 2003

Dear Michigan Citizens:

With this letter we are presenting the *Michigan Diabetes Strategic Plan*. The plan was developed by the Michigan Diabetes Prevention and Control Program, the Diabetes Strategic Plan Steering Committee and the Diabetes Strategic Plan Task Force to address issues related to diabetes care and prevention. Diabetes is a complex metabolic disease that is increasingly becoming a major public health challenge in the United States and Michigan. It:

- Affects 17 million Americans and over one-half million Michigan citizens.
- Costs the U.S. \$132 billion annually and almost \$6 billion per year in Michigan.
- Disproportionately affects some groups of people more than others – certain racial/ethnic groups, physically inactive people, overweight people and those who have a familial predisposition to the disease.
- Is becoming more common among children (type 2 diabetes).

Not since the discovery of insulin has there been a more exciting time in diabetes research and care than now. Scientists have discovered ways to prevent, or at least delay, most types of diabetes and diabetes complications. Lifestyle modifications such as healthy eating, moderate exercise and weight control have been shown to prevent type 2 diabetes by up to 60%. These same strategies, in conjunction with other self-management techniques, can help prevent or delay diabetes complications. These solutions are low-tech and low-cost, yet they produce a high impact. Michigan could significantly reduce the health-related and economic burden of diabetes with the application of these proven prevention and control strategies.

The *Michigan Diabetes Strategic Plan* establishes a unified course of action to help reduce the increasing prevalence and burden of this disease. The plan calls for decision makers, health care providers, public and private health officials, researchers, businesses, community groups and people with diabetes to implement the most promising diabetes prevention and control strategies in the most cost-effective manner. Recommendations in the plan are specifically targeted to address the populations most at risk for diabetes and diabetes complications.

The Michigan Department of Community Health extends its thanks and gratitude to the individuals who served on the Diabetes Strategic Plan Steering Committee and Task Force. They volunteered their time and expertise with their heart-felt dedication to improve the lives of people in Michigan with diabetes and those at risk for diabetes.

Sincerely,



Kimberly Dawn Wisdom, M.D.
Surgeon General, State of Michigan
Co-chair, Diabetes Policy Advisory Council



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Executive Summary

Diabetes is one of the most common, complex and costly chronic health conditions in the United States and Michigan. Diabetes research indicates it is also one of the **most controllable and often preventable** chronic diseases. Despite this promising research, diabetes prevalence rates continue to grow at epidemic proportions.

The Michigan Diabetes Prevention and Control Program has collaborated with diabetes leaders from around the state to respond to this pressing public health challenge. The *Michigan Diabetes Strategic Plan* outlines the need for: (1) increased diabetes prevention and public awareness efforts, (2) statewide advocacy and policy initiatives that reduce barriers to care, (3) effective use of diabetes data and research in clinical settings and (4) targeted diabetes training and program opportunities for people with diabetes and prediabetes and their service providers.

The *Michigan Diabetes Strategic Plan* proposes strategies that utilize current diabetes research, clinical care expertise and practical wisdom from people with diabetes and their service providers. The recommendations in the plan target those individuals most at need with cost-effective strategies to provide quality comprehensive care and self-management training.

The *Michigan Diabetes Strategic Plan* recommendations are:

- ▶ Expand diabetes primary prevention activities.
- ▶ Develop an ongoing public awareness campaign.
- ▶ Maintain a *Statewide Diabetes Resource Directory*.
- ▶ Develop a statewide diabetes consumer advisory group.
- ▶ Restructure the advisory council for the state's Diabetes Prevention and Control Program.
- ▶ Improve access to diabetes self-management training, supplies and health care.
- ▶ Reduce diabetes-related health disparities among minority populations.
- ▶ Hire a diabetes epidemiologist.
- ▶ Create a Michigan Diabetes Cost and Quality of Care Coalition.
- ▶ Develop a Diabetes Research Advisory Consortium.
- ▶ Increase evidence-based clinical knowledge among diabetes service providers.
- ▶ Enable the use of diabetes lay health workers.
- ▶ Provide quality diabetes pregnancy-related care and education to women.
- ▶ Increase the number of ethnically-diverse and culturally-competent diabetes health care providers.

Diabetes At a Glance: Why Should Michigan Care About Diabetes?

It is common.

- ❑ **Michigan has the 7th highest diabetes prevalence rate in the United States.**¹
- ❑ **Approximately 1.3 million Michigan citizens have prediabetes or diabetes.** Prediabetes is a condition which puts individuals at high risk for developing type 2 diabetes within the next 10 years.^{1,2,3}
- ❑ **Of all the persons with type 2 diabetes in the state, over 230,000 do not know they have the disease and are not being treated for it.**^{1,3}
- ❑ Among U.S. adults aged 20 and older, **African Americans are twice as likely as Caucasians to have diabetes, and Native Americans are 2.6 times more likely than Caucasians to have diabetes.**⁴

It is increasing.

- ❑ Among U.S. adults, **diabetes prevalence rates rose 49% from 1990 to 2000.** Rates are expected to continue to rise based on current trends in obesity, physical inactivity and the aging of the baby boomer population.⁵
- ❑ **Type 2 diabetes, formerly called adult-onset diabetes, is increasingly being diagnosed among children and teenagers.**⁶

It is serious.

- ❑ Diabetes is the **leading cause of blindness and kidney failure** in Michigan and a major factor in hypertension, cardiovascular disease and non-traumatic lower limb amputations.²
- ❑ Michigan has the **3rd highest rate of risk for diabetes complications due to obesity.**⁷
- ❑ Diabetes is the **6th leading cause of death** in Michigan and the **4th leading cause of death among African American females in Michigan.**⁸

It is costly.

- ❑ **In 2002, the estimated direct and indirect costs of diabetes in Michigan were nearly \$6 billion.**^{1,9}
- ❑ In 2002, the average health care cost for a person with diabetes was \$13,243 compared with \$2,560 for a person without diabetes.⁹
- ❑ **In 2000, kidney disease, just one complication of diabetes, cost Michigan approximately \$331 million.**²

It is preventable/controllable.

- ❑ Recent research shows that **modest physical activity and healthy eating can cut a person's risk for developing type 2 diabetes by up to 60%.**¹⁰
- ❑ **Diabetes complications can be prevented altogether or at least delayed in most cases** with early intervention and proper treatment. Premature death can also be prevented or delayed.
- ❑ **Diabetes treatment is 95% self-care.** Health maintenance depends upon how well people with diabetes pursue their own self-management.

Prevention Potential for Diabetes Complications

Potential Complications	Percent Preventable
Kidney failure	50% (with better control of blood pressure and blood glucose levels) ⁴
Blindness	up to 90% (with proper screening and care) ⁴
Amputation	up to 85% (with implementation of foot care programs that include regular examinations and patient education) ⁴
Death due to heart disease or stroke	up to 30% (with improved control of blood pressure, blood glucose and lipid levels) ⁶
Heart disease and stroke	up to 50% (with improved control of blood pressure and cholesterol and lipid levels) ⁶
Nerve disease	40% (with a 1% reduction in hemoglobin A _{1c} test results) ⁶
Death due to influenza	80% (with influenza vaccination) ⁶
Ketoacidosis hospitalizations	up to 50% (with outpatient education and ambulatory programs that provide access to medical care) ^{12,13}

SECTION I: BACKGROUND

"Dramatic new evidence signals the unfolding of a diabetes epidemic in the United States. With obesity on the rise, we can expect the sharp increase in diabetes rates to continue. Unless these dangerous trends are halted, the impact on our nation's health and medical care costs will be overwhelming."

Jeffrey P. Koplan, M.D., M.P.H. Director, Centers for Disease Control and Prevention, 1998-2002 ⁴

A. What is Diabetes?

"Diabetes mellitus is a group of diseases characterized by high levels of blood glucose resulting from defects in insulin secretion, insulin action or both."¹⁴

American Diabetes Association

Diabetes is a condition that occurs when the body cannot use blood glucose as energy because of having too little insulin or being unable to use insulin. After a meal, food is typically broken down into a sugar called glucose and carried throughout the body for energy. Cells require a hormone called insulin, produced in the pancreas, to help them turn blood glucose into energy.

In people with diabetes, however, there is a defect in insulin production, insulin utilization or both. This results in high levels of blood glucose (hyperglycemia) in the blood stream while the cells are left starving. As a result, long-term complications can occur.^{15,16} Diabetes is also known to cause immediate or acute complications under certain circumstances.



Potential Long-term Complications of Diabetes

- **Kidney failure**
- **Blindness**
- **Amputation**
- **Heart disease**
- **Stroke**
- **Nerve disease**
- **Complications of pregnancy**
- **Gum disease and loss of teeth**
- **Depression**

Acute or immediate health problems associated with diabetes include:

- Hypoglycemia (low blood sugar)
- Hyperglycemia (high blood sugar)
- Diabetic ketoacidosis
- Hyperosmolar hyperglycemic state

B. What are the different types of diabetes?

Type 1 diabetes, formerly called insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes, occurs when the body fails to produce the hormone insulin, which regulates blood glucose.



- In order to survive, individuals with Type 1 diabetes must take insulin every day.
- Once the symptoms of type 1 diabetes occur, it is rare for this type of diabetes to go undiagnosed for more than three to four weeks.¹⁷
- Type 1 diabetes usually occurs among children and young adults and accounts for 5% to 10% of all diagnosed cases of diabetes.⁶

- Risk Factors for type 1 diabetes include: autoimmune factors, inherited factors and environmental triggers (chemicals, viral infections and stressful situations).^{6,17}

Type 2 diabetes, the most common form of diabetes, formerly called non-insulin-dependent diabetes mellitus (NIDDM) or adult-onset diabetes, occurs when the body fails to make enough insulin or to properly use insulin.

- Its onset is usually gradual, with little to no symptoms at first. Symptoms can develop over months or years.¹⁷
- Many people with type 2 diabetes can control their blood sugar through meal planning and exercise. Others need the help of diabetes medication.
- The majority of persons with type 2 diabetes are over age 40. However, it is increasingly appearing among children and young adults.⁶
- Many people are unaware they have type 2 diabetes and are not receiving the treatment and education they need.
- Type 2 diabetes accounts for about 90% to 95% of all diagnosed cases of diabetes.⁶

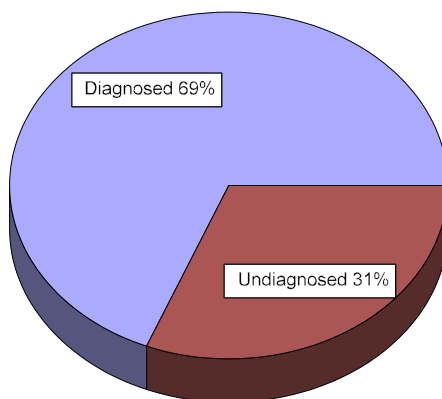


The four main types of diabetes:

- 1) Type 1 diabetes**
- 2) Type 2 diabetes**
- 3) Gestational diabetes**
- 4) Other specific types**

More than 30% of the people with diabetes in Michigan have not been diagnosed and are not being treated – that translates to over 230,000 Michigan citizens who have diabetes and do not know it.^{1,3}

Adults with Type 2 Diabetes in Michigan



Risk Factors for Type 2 Diabetes

- Being overweight (weight is 20% higher than ideal for height)
- Having a family member with diabetes
- Being physically inactive (exercise less than three times per week)
- Having high blood pressure or high cholesterol
- Being an African American, Native American, Asian American, Hispanic American or Pacific Islander
- Having a history of gestational diabetes or delivering an infant that weighed over 9 pounds
- Having prediabetes (impaired glucose tolerance or impaired fasting glucose level)^{15,16}

Gestational diabetes is a form of diabetes that occurs in some pregnant women who have had no known prior history of diabetes before pregnancy.

- In general, requires treatment only during pregnancy.
- Treatment helps to normalize maternal blood glucose levels and to prevent complications in the infant.
- Gestational diabetes usually subsides after pregnancy.
- About 5% to 10% of women diagnosed with gestational diabetes are found to have type 2 diabetes after pregnancy. An additional 20% to 50% of those who have had gestational diabetes are likely to develop type 2 diabetes in the next 5-10 years.⁶



Risk Factors for Gestational Diabetes

- Being an African American, Hispanic/Latino American, or Native American
- Being overweight
- Having a family history of diabetes ⁶

Other specific types of diabetes occur less frequently and result from unique medical conditions.

- Causes include genetic conditions, surgery, drugs, malnutrition, infections and other illnesses.
- Account for 1% to 5% of all cases of diabetes.⁶

Prediabetes is a term which is applied when an individual's blood glucose levels are higher than normal but not high enough to be considered diabetes. People with prediabetes often do not show symptoms. However, they are at high risk for developing type 2 diabetes. In addition, they are also at greater risk for having heart attacks and strokes.¹⁸ Studies suggest prediabetes may be reversible.^{6,10}

There are almost 575,000 people in Michigan with prediabetes. Studies show that most people with prediabetes develop type 2 diabetes in 10 years.^{2,18}

Risk Factors for Prediabetes

- Being overweight
- Maintaining a sedentary lifestyle
- Eating an imbalanced diet (imbalance in amount of food or types of food)
- Having a family history of diabetes
- Having high blood pressure or high cholesterol
- Belonging to a minority group that is at-risk for type 2 diabetes (African American, Native American, Hispanic Americans/Latino Americans and Asian American/Pacific Islander)
- Having a history of gestational diabetes or delivering an infant that weighed over 9 pounds¹⁹

Diabetes: A Personal Profile

Julia Tarsa, 41, says that, as strange as it may seem, having type 2 diabetes has actually improved the quality of her life. "I am really good at taking care of myself now," Tarsa says, "whereas before I used to overwork all the time".

It's no longer an option **not** to change behaviors for her health now, she says. Not doing self-care is dangerous for people with diabetes. Tarsa watched one of her grandmothers die a horrible death with open wounds from diabetes and another grandmother have a leg amputated due to diabetes.

Tarsa, who used to work for a large university, was diagnosed with the disease three years ago. Since then, she has opened her own counseling practice focusing on clients with health challenges.

"I set my own hours and have my own business. I make sure I have time to make my own meals and chop up my vegetables,..." she says. Tarsa does not take medication for her diabetes. She controls it through meal planning and exercise. She also visits her doctor quarterly, has an A_{1c} test three times a year, meets with a nutritionist regularly, gets adequate rest and receives energy therapy treatments. After she was diagnosed, she met with a diabetes educator and learned strategies to control her diabetes. She is very pro-active about controlling her diabetes through self-management strategies. "I hope it is a long time before I have to take medicine," Tarsa says.

With the addition of her self-care activities, Tarsa says she does half of what she used to do. "I make less money, but I am taking care of myself, and I can't think of a better thing to do."

Despite the reduction in income because of working less and spending more on medical supplies and bills, Tarsa says she has found increased meaning in her work and life. She says she really appreciates the down time that diabetes has taught her to take. In fact, she

says it has given her a lot of empathy for her clients.

Tarsa serves as a role model for her clients--



Julia Tarsa

helping them to advocate for themselves in achieving better health. Tarsa has had to do a lot of advocating for herself on her own health journey.

It took her a year to convince her doctor that she needed to be re-tested for diabetes. She was tested with

the fasting glucose test, however "the fasting glucose test did not do anything for me," Tarsa says. She knew she was having symptoms of diabetes from watching her grandmothers. She persisted in asking her doctor for the glucose tolerance test. "Finally I demanded it after a year. I had to be a very assertive patient," Tarsa said. Her suspicions were correct. She had type 2 diabetes. Doctors now tell her that she probably had diabetes several years before it was diagnosed.

Tarsa is is a strong proponent of people advocating for their health care. She reminds her clients often to be advocates for themselves. And she shows them how in the way she lives her life.

C. What is the Burden of Diabetes?

What is the prevalence of diabetes in the United States?

- ▶ It is estimated that **17 million Americans have diabetes.**⁶
- ▶ One million people aged 20 and over are newly diagnosed each year.⁶
- ▶ Diabetes rates increased 49% among adults (including gestational diabetes) in the last decade.⁵

"Dramatic new evidence signals the unfolding of a diabetes epidemic in the United States. With obesity on the rise, we can expect the sharp increase in diabetes rates to continue. Unless these dangerous trends are halted, the impact on our nation's health and medical care costs will be overwhelming."

**Jeffrey P. Koplan, M.D., M.P.H.
Director, Centers for Disease Control and Prevention, 1998-2002**⁴

What is the prevalence of diabetes in Michigan?



- ▶ In 2002, 524,000 Michigan adults reported having been diagnosed with diabetes.¹ According to national studies, another 230,500 Michigan adults also have diabetes but do not know it.^{1,3}
- ▶ **In total, over 750,000 Michigan citizens have diabetes.**
- ▶ **There are almost 575,000 additional Michigan residents with prediabetes** – a condition that puts individuals at high risk for developing type 2 diabetes.²

What is the Economic Burden of Diabetes?

In the United States

The economic burden of diabetes is enormous and is continuing to grow. In 2002 total costs for diabetes and diabetes complications in the U.S. were estimated at \$132 billion per year (with a significant percentage attributed to treatment of complications).²⁰



In 1997, 15% of all national health care expenditures were attributed to diabetes.²¹

Cost of Diabetes in 2002, United States ²⁰	
Disability	\$18.3 billion
Premature death	\$21.6 billion
Diabetes and acute glycemic care (control of blood sugar levels)	\$23.2 billion
Diabetes-related chronic complications (e.g., kidney, eye, nerve, circulatory and endocrine disorders)	\$24.6 billion
Excess prevalence of other medical conditions not related to diabetes	\$44.1 billion
Total	\$131.8 billion

In Michigan

The economic burden of diabetes is also high for Michigan. In 2002, direct and indirect costs for diabetes were almost 6 billion.^{1,20}

Cost of Diabetes in 2002, Michigan ^{1,20}	
Disability	\$0.78 billion
Premature death	\$0.92 billion
Diabetes and acute glycemic care (control of blood sugar levels)	\$0.99 billion
Diabetes-related chronic complications (e.g., kidney, eye, nerve, circulatory and endocrine disorders)	\$1.05 billion
Excess prevalence of other medical conditions not related to diabetes	\$1.88 billion
Total	\$5.62 billion

These figures **do not** include the added direct and indirect costs of persons who have diabetes but are unaware of it.

Research has shown that diabetes complications can be drastically reduced with better self-management and prevention techniques (see Prevention Potential for Diabetes Complications, page vi and 11). Based on the national statistics, Michigan could save millions of dollars in preventable complications.

The Michigan Department of Community Health estimates that at least half of the new cases of diabetes-related kidney failure and lower-extremity amputations could be prevented each year with the implementation of aggressive prevention efforts.

Utilizing Michigan data from 2001, it was estimated that Michigan could save over \$100 million per year by addressing just three of the preventable complications from diabetes (see table below).

**Potential Cost Savings in 2001 from Preventable Diabetes Complications
Using Michigan Data**

Complication	No. of Cases in 2001 ²²	Average Length of Hospital Stay ²²	Average Medical Costs ^{23,24,25}	Average Percent Preventable ^{6,12,13}	Potential Annual Savings
Amputation	1,564	11.8	\$29,000	65%	\$29.5 million
Kidney Disease	2,404	7.9	\$51,000	50%	\$61.3 million
Ketoacidosis	4,279	3.6	\$ 8,000	45%	\$15.4 million

Total Potential Cost Savings: \$106.2 million

What is the personal burden of diabetes?

Despite the tremendous economic costs associated with the disease, the personal impact of diabetes is a figure that cannot be calculated. Losing one's sight or a foot, or being dependent on machines or surgery to survive are consequences that people with diabetes face each year in Michigan.

Other potential human costs of diabetes include:

- Lower quality of life if improperly managed.
- Missed work or social/family events.
- Fear of premature death.

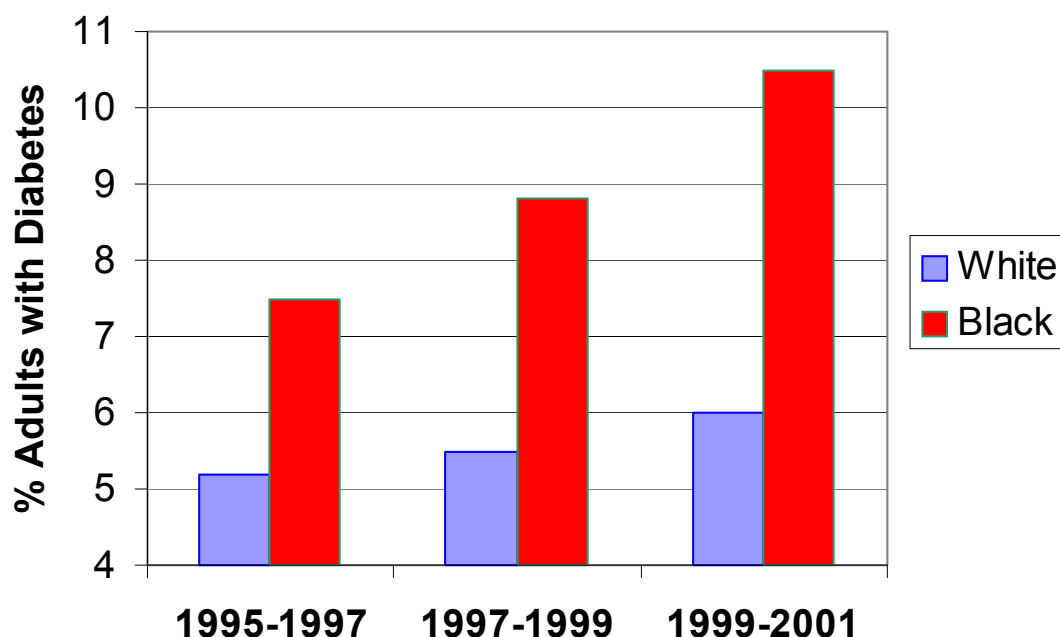
Who has diabetes?

Among adults, the prevalence rate of diabetes in Michigan is significantly higher among Blacks than Whites for the years 1995 to 2001.^{26,27} In this particular data, ethnic groups are not categorized separately from racial groups. Thus, White Hispanic/Latino Americans are included in the White race along with Caucasians. And, Black Hispanic/Latino Americans are included in the Black race along with African Americans. In Michigan, there has been a 40% increase in diabetes prevalence rates among Blacks from 1995 to 2001. Among both races, Michigan has seen an upward trend in diabetes prevalence rates since 1994.



The CDC reports that diabetes prevalence rates are highest among certain racial and ethnic groups. Although Native Americans and Asian Americans* are not depicted in the graph, it is known that together with African Americans and Hispanic/Latino Americans, they comprise one-quarter of the adults in Michigan who have diabetes.²

Prevalence of Diabetes in Michigan by Race



*The BRFSS race categories include: Black, White, Native American and Asian American. The sample size for Native Americans and Asian Americans within the Michigan BRFSS is too small to determine an accurate prevalence rate for these racial groups. However, CDC surveillance studies indicate that on a national level Native Americans aged 20 and older are 2.6 times more likely to have diabetes than Whites.⁴

Diabetes: A Personal Profile

Ted De Leon wasn't surprised when he got "azucar" in his early 40's. He said he was well aware of the increased prevalence of diabetes or "azucar" (Spanish for sugar) in the Latino community.

Prediabetes screening was not common 15 years ago to help him prevent diabetes. But, De Leon knew enough about the symptoms of the disease, especially frequent urination, to get a check-up right away when he started having problems. Unfortunately, many in the Latino community aren't as knowledgeable about diabetes, De Leon says. Among his peers, he suspects many have diabetes yet have not had the glucose tests. De Leon says that Michigan needs to circumvent the problem of diabetes ignorance in communities of color. "There's a lot of denial about this silent killer."

"People gotta know what [diabetes] is about," De Leon says. He has seen its ravages among his family members and friends. His aunt had diabetes and lost both her limbs (eleven out of 13 of De Leon's family members have diabetes). Seeing the potential effects of the disease really hits home, he says. De Leon has a friend with severe complications of the disease -- kidney failure and both legs and genitals amputated -- all due to diabetes.

Fortunately, De Leon has not developed any complications from diabetes. He keeps himself abreast of diabetes self-management techniques presented on the Internet and remembers what can happen to people who don't control their disease. He walks frequently, eats healthy meals and tries to control his weight. He has even found ways to cook traditional Latino meals in healthier ways. It is also helpful to have a good doctor, De Leon says. "I have insurance though, and I can drop by and see my doctor. When 44% of our Chicanos don't have insurance they are in dire straights."

De Leon donates his spare time to help ensure that people in communities of color have access to care and diabetes awareness. He is a member

of Health Alliance Mestizo Annisabe, a volunteer grassroots organization dedicated to improving the health of Latino Americans, Chicano Americans and Native Americans.

Mestizo Annisabe pays for a mobile health unit to visit and serve communities of color with free medical care. The organization also works to ensure that public health workers practice cultural sensitivity. It is important to respect cultural diversity in presenting health education, De Leon says.



Ted De Leon

Health care providers need to be effective from a cultural **and** linguistic perspective, De Leon says. It is not acceptable to allow miscommunication of health information due to poor translation, he maintains. There should not be janitors, family members or other untrained persons at hospitals translating medical information to people with diabetes, De Leon says. Toward this end, De Leon is working to produce Spanish and Ojibwa translations of diabetes educational materials.

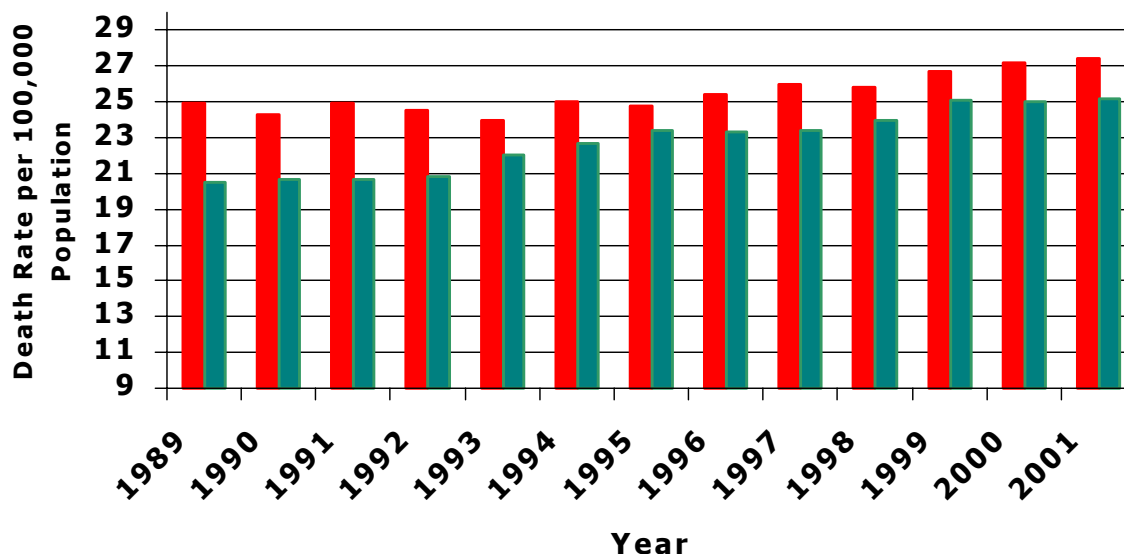
De Leon also volunteers his time to recruit and train Latino and Native American diabetes support group leaders with the Joining People with Diabetes Program.

In 2000, there were an estimated 20,800 Latino/Hispanic Americans diagnosed with diabetes – about 6.2% of the Latino/Hispanic population.²

How serious is diabetes?

- ▶ **In the year 2001 alone, over 2,600 Michigan citizens died as a direct result of diabetes.** Another 5,269 people died the same year with diabetes cited as a contributing cause.⁸
- ▶ Diabetes ranks as the **sixth leading cause of death in Michigan.**⁸
- ▶ For several years Michigan has continued to have higher death rates from diabetes than the national average. While Michigan has made progress in slowing the rate of increase in mortality due to diabetes, it still remains above the national average.
- ▶ According to the CDC, the **risk for death among people with diabetes is about 2 times that of people without diabetes.**⁶

Death Rates in Michigan and the US¹ With Diabetes as the Primary Cause



¹Age Adjusted to the 2000 Standard Population
MDCH and National Center for Health Statistics Data:
MDCH Resident death data for 1980-2001
US National Vital Statistics Report Vol. 46-48

■ Michigan ■ US

What are the potential complications of diabetes?

In the year 2000, diabetes was the leading cause of kidney failure, blindness and lower limb amputation in Michigan. It was also a major factor in hypertension and cardiovascular disease.²

Kidney Complications

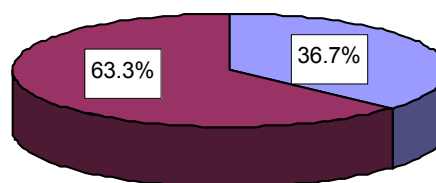
- ▶ **Almost 1,500 new cases of kidney disease were diagnosed in 2000 due to diabetes.**
- ▶ In the year 2000 alone, people with kidney failure due to diabetes received 152 (30%) of the kidney transplants performed in the state.
- ▶ Data collected at the end of 2000 indicates that **almost 42% of all people in the state receiving kidney dialysis have diabetes.** The data also shows that approximately 26% of all people living with kidney transplants in the state are people with diabetes.²

Eye Complications

The National Eye Institute estimates there are 184,589 persons in Michigan with diabetic retinopathy—a common complication in which the retinal blood vessels break down, leak or become blocked and impair vision. This equates to more than one-third of Michigan's population with diabetes (36.7%) having diabetic retinopathy.²⁸

Diabetic retinopathy can cause serious eyesight problems and blindness – if left untreated.

Percentage of Michigan Adults with Diabetic Retinopathy (among adults with diabetes)



■ Diabetic Retinopathy
■ No Diabetic Retinopathy

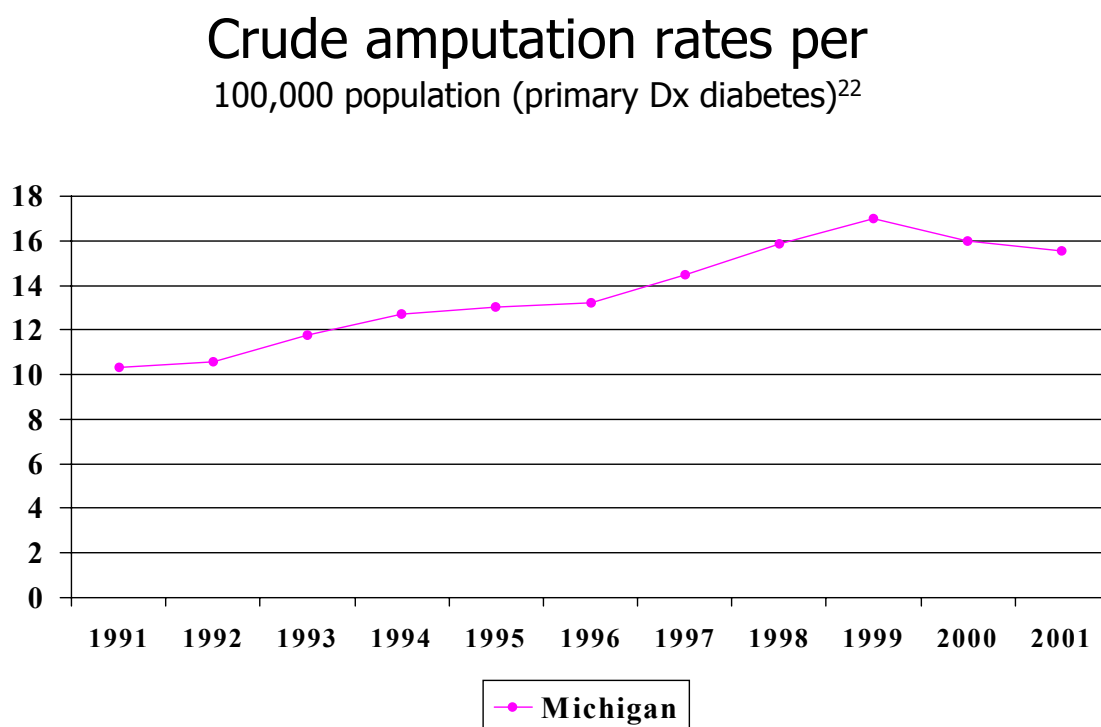
Risk for diabetic retinopathy increases with duration of the disease, with age and with poor glucose control.²⁹

Amputations

Over 1,500 people had some form of lower limb amputation due to diabetes in 2001.²²

Cardiovascular Complications

In 2000, there were almost **70,000 hospitalizations for Michigan citizens with diabetes involving hypertension and cardiovascular disease**— two conditions commonly associated with diabetes.²



Over the past decade, diabetes prevalence rates, death rates and rates of complications associated with diabetes have been on the rise in Michigan. Much of the increase, according to the Michigan Department of Community Health, is likely due to “a more sedentary, progressively overweight, and increasingly older population.”

Diabetes: A Personal Profile

When asked how involved he is in his diabetes care on a scale of 1 to 10, Randy Prince says he is about a 9. "I'm very involved but I am always searching for helpful advice," says Prince who was diagnosed with type 1 diabetes at the age of 14.

Prince, now 35, says he appreciates doctors who encourage him to be more independent with his care. "It probably took until I got out of high school before I felt like I didn't have to rely on my doctor to adjust my food, activity or insulin to get my blood sugar under control."

When Prince was first diagnosed as a teenager, he spent about 10 days in the hospital getting his blood sugar stabilized and learning about diabetes. Prince and his mom took classes on diabetes self-care after he left the hospital. He says his family was very helpful in his lifestyle adjustments. His parents and two brothers began eating the same meals, including low-sugar desserts. Prince says it would have been difficult had they made a separate meal for him and treated him differently.



Randy Prince at 14

Before he was diagnosed, Prince says the only thing he knew about diabetes was that it is chronic. "I was grateful that my pediatrician encouraged me to feel I could have control over the disease," Prince said. Health care providers should "let people with diabetes know that they have control to live as long a life and as good a life as they can with the right self-care."

Prince is dedicated to continually improving his self-care. He has found that he can control his blood glucose better when he carefully monitors his activities and adjusts his insulin according to his individual needs. He says in the past, doctors

who gave him generic protocols to use for his insulin injections hindered his self-care.

"I realize that the doctor is not there all the time. The doctor sees numbers of lab tests, which are helpful... but not the whole picture." Prince takes responsibility for his care and thinks that others with diabetes should also. "My blood glucose levels are better when I am more closely involved in my care."

Prince, a physical therapist, is very aware of the real consequences of uncontrolled blood sugar. "Whenever I have a high blood sugar reading, I say this is going to effect me in the long term."

Prince also knows the very real financial consequences of the disease. "What's difficult is the high prices for diabetes products (e.g., test strips, insulin, meters, syringes) which are not justified." He says that in the mid 1980's a bottle of insulin cost him \$18. Now the same bottle costs him about \$45. That's a 150% increase in price. Prince says he would like to see restrictions on the high costs of these products.

Prince has had periods in his life when he has not had health insurance and has had to pay out of pocket for his diabetes care. In 1990, he paid about \$1200-1500 on his diabetes care without insurance. He could not get private insurance because diabetes was a pre-existing condition. Like many persons with diabetes, in order to maintain insurance, he had to have a job that provided health insurance benefits.

No matter what the cost or the challenge, however, Prince remains adamant about his individual responsibility for his diabetes self-care. "I am responsible for myself. If I'm not responsible for myself, I'm going to get in trouble."

D. What Can Be Done to Prevent Diabetes?

“Research studies in the United States and abroad have found that lifestyle changes can prevent or delay the onset of type 2 diabetes among high-risk adults.”

Centers for Disease Control and Prevention ⁶

While researchers have not yet found ways to prevent type 1 diabetes, they have found several important factors in preventing or at least delaying type 2 diabetes. The Diabetes Prevention Program (DPP),¹⁰ a major research study of people at high risk for developing diabetes showed that **lifestyle changes such as eating healthy meals and exercising moderately can help prevent type 2 diabetes by up to 60 %**. The lifestyle modifications used in the study were successful among people of all ages, both sexes and all racial/ethnic groups.

Prevention Strategies Used in Major Research Studies¹⁰

- Meal planning: eating nutritious, well-balanced meals in planned proportions
- Moderate, consistent physical activity (e.g., walking 30 minutes five times a week)
- Modest weight reduction of 7% for overweight individuals

The DPP study also revealed the possible role of medication in diabetes prevention.

Metformin, an oral diabetes medication, was successful at reducing the risk of diabetes among high-risk individuals by about 30 %. However the drug was not uniformly successful for all types of participants. Those who were younger (aged 25 to 40) or significantly overweight (by 50 to 80 pounds) fared better with the medication than individuals who were older or not as heavy.¹⁰ More research will likely occur on the use of medication as a tool for preventing diabetes.

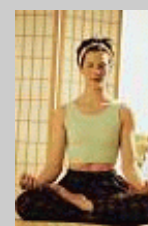


Diabetes experts agree on effective strategies anyone can use to reduce the risk for developing type 2 diabetes. However, as effective as the strategies are, they are simply not emphasized or utilized enough in Michigan. **Practicing health promotion behaviors and avoiding specific risk factors can help individuals minimize their chance of developing diabetes and other chronic diseases.** Training and programs are available to help persons at risk for diabetes to prevent the

disease (e.g., see *Small Steps. Big Rewards. Prevent Type 2 Diabetes* online at www.ndep.nih.gov/get-info/dpi.htm).

Diabetes Prevention/Health Promotion Strategies

- **Weight Control:** A 5% to 10% weight reduction is suggested for people who are overweight and have prediabetes.³⁰
- **Nutrition:** Eating foods from the five food groups in the appropriate amounts can help individuals prevent obesity and other chronic health conditions. Eating a high fat /low fiber diet is a possible risk factor for diabetes.³¹
- **Physical Activity/Exercise:** Exercising moderately three to five times a week can help individuals reduce stress, maintain a healthy weight and reduce the risk of developing diabetes and other chronic health conditions.
- **Avoid Tobacco:** Cigarette smoking is a risk factor for many health conditions and is a possible risk factor for diabetes.³¹ Quitting smoking, no matter how long individuals have smoked will improve their health.
- **Limit Alcohol Use:** Drinking alcohol adds “empty calories” and can cause long-term health problems.
- **Stress Management:** Reducing stress can help individuals stay healthier and reduce risk factors for disease. Exercise, relaxation techniques such as yoga or Tai Chi, meditation and biofeedback are some strategies commonly used for stress management.
- **Regular Health Check-ups:** Regular visits with a health care provider are an important aspect of maintaining health. Blood pressure and cholesterol levels should be checked yearly. It is important for people to learn techniques to lower their blood and cholesterol levels if indicated.



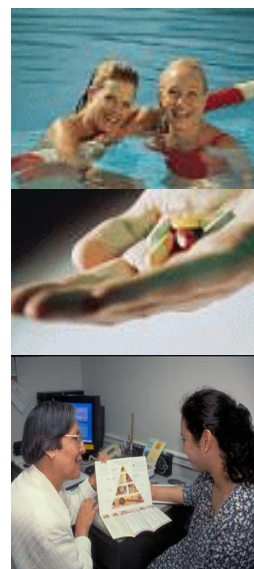
E. How Can Diabetes Be Treated and Self-Managed?

Treatments

Type 1 diabetes requires insulin administration for survival. Insulin is most commonly administered by intermittent injections or by infusions using a pump. The use of insulin must be combined with meal planning, blood glucose monitoring and exercise for proper management.

Type 2 diabetes can be controlled with meal planning, exercise, weight management and, if required, medications to lower blood glucose. Many persons with type 2 diabetes also may require medication to lower their blood pressure and cholesterol.

Gestational diabetes is managed through meal planning, physical activity and, in some cases, insulin.



All forms of diabetes require a multi-faceted treatment approach. Medication (insulin or pills) alone is not sufficient.

Diabetes Self-management

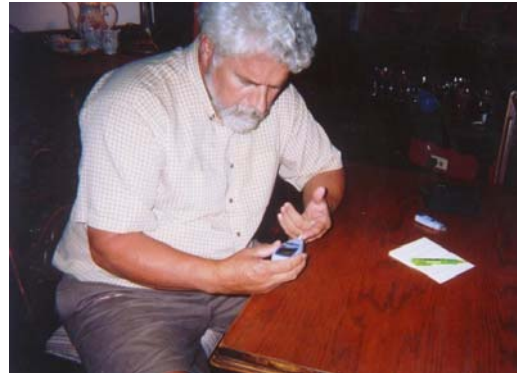


Over 95% of the responsibility of diabetes lies with the person who has it. Successful diabetes management requires specific knowledge, skills and appropriate attitudes to effect lifelong behavior changes related to food intake, activity/exercise, blood glucose monitoring and medical care.

The following activities necessary for controlling blood sugar and preventing complications require daily vigilance (see chart on pages 21 and 25).

Daily Self-Management Activities

- ✓ Following a meal plan
- ✓ Exercising regularly
- ✓ Taking medications at specified times
- ✓ Testing blood glucose levels
- ✓ Doing daily foot and skin care
- ✓ Taking care of teeth and gums
- ✓ Being prepared for any changes in blood sugar
- ✓ Managing stress and stressful events of life, especially illness
- ✓ Limiting alcohol intake and avoidance of tobacco



In addition to these daily activities, it is important that persons with diabetes assume responsibility for the following episodic tests, examinations and evaluations:

Self-Management Strategies for Diabetes Throughout the Year

- ✓ Hemoglobin A_{1c} test one to four times a year (frequency indicated by physician)
- ✓ Blood pressure checks at every physician visit (or as indicated by physician)
- ✓ Cholesterol and triglyceride testing at least once yearly
- ✓ Dilated eye exam yearly
- ✓ Regular foot check at each physician visit
- ✓ Complete foot exam (check for circulation, loss of feeling, sores or changes in shape) once a year
- ✓ Urine test to check for kidney problems once a year
- ✓ Dental exams to prevent gum disease and loss of teeth twice a year
- ✓ Meet with a diabetes educator at least once a year
- ✓ Additional visits with other members of one's diabetes health care team (e.g., nutritionist, endocrinologist, podiatrist, etc.)



Diabetes Self-Management Training



Diabetes Self-Management Training (DSMT) is the key to promoting and maintaining behavior change for people with diabetes. DSMT is an interactive, ongoing training process that occurs between people with diabetes (or people who are at risk for diabetes) and diabetes educators.

DSMT programs provide a mechanism for people with diabetes to develop strategies for successful use of diabetes self-management activities in their daily lives. Because the behavior changes can be difficult to sustain, ongoing reinforcement and support is necessary. Many people with diabetes attend support groups and ongoing educational programs often sponsored by DSMT programs. Persons who are at risk of developing diabetes may also be candidates for DSMT programs since the programs emphasize activities such as healthy eating, physical activity and weight management.

"Self-management training is a critical part of the medical plan for people with diabetes or who are at risk for development of the disease. Medical treatment of diabetes without systematic self-management training cannot be regarded as acceptable care."

American Diabetes Association

Psychosocial Factors and Diabetes Self-Management

The very nature of a chronic disease such as diabetes makes it difficult to manage on an ongoing basis. It is relentless in its demands on the person who has the disease as well as on family members. There are several psychosocial factors which may affect how well individuals with diabetes meet these demands and challenges:

- Family or other support
- Socio-economic status
- Coping abilities
- Availability of mental health services
- Access to DSMT and other health care
- Ability and willingness to partner with health care providers
- Personal motivation
- Co-existing health conditions



Denial is one coping mechanism often used by people with diabetes to avoid facing the realities of the disease and its consequences. Denial occurs in all types of diabetes, but is particularly common in type 2 because people often do not feel sick, especially in the earlier stages. Denial results in lack of motivation to make or maintain behavior change or follow medical treatment plans. However, lack of symptoms, or outward evidence of complications, does not mean that damage has not occurred.



Few people welcome the responsibilities and the demands required to manage diabetes in their daily lives. The overwhelming burden this causes for some people can lead to depression and anxiety which can negatively influence their self care. Left untreated, depression can cause a downward spiral in health among some persons with diabetes. Diabetes self-management training and the availability of support groups can be the beginning of halting that spiral.

**Depression →→ lack of motivation and lowered self-esteem
→→ abandonment of self-management strategies →→
additional health complications →→ emotional reactions
(guilt, shame, lowered self-esteem, anger, helplessness)
→→ more depression →→ more health problems**

Behavior change is never easy, and as many experts agree, it is very difficult to accomplish alone. Yet, for diabetes treatment to succeed, behavioral measures are key. The medical model focuses on acute care which is insufficient to succeed when treating a chronic disease such as diabetes. Chronic disease requires a model which incorporates partnership, empowerment and support in order to be effective. Increasingly, this model is gaining recognition along with recent public interest in personal health improvement. The current system of DSMTs, support networks and community structures play a key role providing new ways to empower and support people with diabetes in successfully treating their disease and living well.

"As a nurse and a person with diabetes I know what to do intellectually to take care of myself. However, in a support group I can join with others who encourage me to do it. Each time I share my story, I am more vigilant about my own self-care. "

**Judith Claytor, R.N., B.S.N., B.A.
HeartReach Program, Spectrum Health**

Diabetes: A Personal Profile

Harvey Ardis, a retired state employee with type 1 diabetes, came up with his own motto for diabetes control. Ironically, he calls it D.I.E. "Diet, Insulin and Exercise or... Die."

Ardis, who can usually be seen wearing a big smile, will gladly tell anyone who asks how he has controlled his diabetes for 34 years. He monitors what he eats, walks about three-to-five miles a day or more, wears an insulin pump and checks his blood glucose levels seven-to-eight times a day. Wearing an insulin pump has been the biggest factor that has helped him to control his diabetes, Ardis says. Many people would not want to check their blood glucose that frequently. But, he firmly believes that "if you don't know where you are at, you can't make adjustments."

He first learned about the pump when he participated in the landmark Diabetes Complications Control Trial (DCCT) study. The study is geared to help people with diabetes control their blood glucose levels. Ardis still participates in a follow-up once a year with the study. Because of the study, Ardis was trained in diabetes self-management and received a free insulin pump. "I don't know if I would be as committed to my self-care, if I had not had the training," Ardis says.

Ardis says he feels very fortunate to have received so much help. "That's why I want to help people [with diabetes] now." And he does.

Ardis volunteers to speak to the Lions Clubs of Michigan about diabetes and to anyone inside or outside of his doctor's office who wants to learn more about using an insulin pump. He is a former member of the board of directors of the American Diabetes Association and works with a statewide diabetes consumer support and advocacy group called Joining People with Diabetes (see Appendix H).

Ardis follows the philosophy that it is not what happens to you in life that matters, it is what you do about it. "I've used diabetes to my

advantage, not my disadvantage," Ardis says. Pulling on his waistline, he demonstrates the two inches he's lost from his waist due to his increased exercising. Ardis made it his goal when he retired to exercise more. In doing so, he has significantly lowered the amount of insulin he needs to take. He says he feels better overall when he follows his motto and continues his self-care.



Harvey Ardis

Ardis is not so rigid in his care, however, that he is afraid to live. If he wants to have an ice cream cone with his daughter he does. "I just ... monitor and adjust."

When he goes for his daily walks he takes water and juice for fluctuations in his blood glucose levels. He says he is always making a lot of little adjustments in his insulin. "I'm human." The key is that he takes ultimate responsibility for his health...day in and day out. Ardis says he likes to challenge people he sees who are not taking control of their diabetes, "You saw the doctor for 20 minutes...who is going to take care of you for the rest of the month?"

Based on his philosophy and actions, there is no question who is going to take care of Ardis -- he has no intention of *dying* anytime soon.

Prevention of Diabetes Complications

Many Complications of Diabetes Can Be Prevented

(Excerpted with permission from the Centers for Disease Control and Prevention Web site)³²

National Facts and Figures

Eye disease and blindness. Each year, 12,000—24,000 people become blind because of diabetic eye disease. Screening and care could prevent up to 90% of diabetes-related blindness. However, only 60% of people with diabetes receive annual dilated eye exams.

Kidney disease. About 38,000 people with diabetes develop kidney failure each year, and over 100,000 are treated for this condition. Treatment to better control blood pressure and blood glucose levels could reduce diabetes-related kidney failure by about 50%.

Amputations. About 82,000 people have diabetes-related leg and foot amputations each year. Foot care programs that include regular examinations and patient education could prevent up to 85% of these amputations.

Cardiovascular disease. Heart disease and stroke cause about 65% of deaths among people with diabetes. These deaths could be reduced by 30% with improved care to control blood pressure and blood glucose and lipid levels.

Pregnancy complications. About 18,000 women with preexisting diabetes deliver babies each year, and an estimated 135,000 expectant mothers are diagnosed with gestational diabetes. These women and their babies have an increased risk for serious complications. Screenings and diabetes care before and during pregnancy can reduce the risk for complications such as stillbirths, congenital malformations and the need for cesarean sections.

Flu- and pneumonia-related deaths. Each year, 10,000—30,000 people with diabetes die of complications from flu or pneumonia. They are roughly three times more likely to die of these complications than people without diabetes. However, only 55% of people with diabetes get an annual flu shot.

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<http://www.cdc.gov/diabetes/pubs/glance.htm#2>

Section II: The Plan

"Having worked with people with diabetes for many years, I have seen most of the ravages of this disease. The good news is that we can now delay or prevent diabetes. I am completely convinced that the health care community and consumers must both embrace this message and implement simple prevention strategies. Preventing diabetes will play an important role in future generations, both in the way health care is delivered and the cost of delivering that care. If we are to curb this epidemic, we have no choice but to work together to support and inform those at risk for developing diabetes to make necessary lifestyle changes."

Jean Hare, R.N., M.P.A., C.D.E.

Southern Michigan Diabetes Outreach Network (SODON) Director

A. Strategic Plan Recommendations

Prevention and Public Awareness Initiatives

- **Expand diabetes primary prevention activities.**
- **Develop an ongoing public awareness campaign.**
- **Maintain a *Statewide Diabetes Resource Directory*.**
- **Develop a statewide diabetes consumer advisory group.**

Advocacy and Policy

- **Restructure the advisory council for the state's Diabetes Prevention and Control Program (Diabetes Policy Advisory Council).**
- **Improve access to diabetes self-management training, supplies and health care.**
- **Reduce diabetes-related health disparities among minority populations.**

Data and Research

- **Hire a diabetes epidemiologist.**
- **Create a Michigan Diabetes Cost and Quality of Care Coalition.**
- **Develop a Diabetes Research Advisory Consortium.**
- **Increase evidence-based clinical knowledge among diabetes service providers.**

Training and Programs

- **Enable the use of diabetes lay health workers.**
- **Provide quality diabetes pregnancy-related care and education to women.**
- **Increase the number of ethnically-diverse and culturally- competent diabetes health care providers.**

See Diabetes Strategic Plan Partners on page 58 for organizations participating in implementation of recommendations.

Prevention and Public Awareness Initiatives

Introduction and Statement of Problem

Diabetes is often called a “silent” disease. Symptoms of the disease usually do not arise until significant damage has already occurred. People can have type 2 diabetes for years and not know it. An estimated 230,000 people in Michigan have type 2 diabetes and are unaware of it. Another 575,000 people have prediabetes and may not know that modest lifestyle changes can prevent the disease. Thousands of additional Michigan citizens, because of lifestyle choices, family history or racial/ethnic background are also at risk for diabetes and do not know it.

Diabetes is a silent disease on many levels. Among people with diabetes, many individuals deny or minimize its seriousness. Thus, a wide gap exists between current and desired diabetes self-management practices. In the health care field, some medical providers still ignore or deny the seriousness of diabetes until complications arise. The most recent scientific evidence demonstrates that much of the morbidity and mortality of diabetes can be delayed or eliminated by aggressive treatment along with meal planning, physical activity and new medical agents to control blood glucose levels. Unfortunately, this kind of treatment and self-management is too often unavailable or underutilized.

Diabetes is also silent because public awareness is low. People at risk for diabetes, persons with diabetes and individuals and organizations who care for people with diabetes could be strong advocates for diabetes initiatives. Unfortunately, these individuals often lack even basic knowledge of the disease and its prevention or treatment strategies.

Increasing public awareness of diabetes prevention, treatment and self-management; providing readily available, current information; and empowering consumer support and advocacy groups will help to make diabetes heard. With more information and awareness, people with diabetes are more likely to acknowledge its seriousness, seek appropriate treatment, self-manage the disease and prevent or delay its complications. Furthermore, with the increased visibility of diabetes, health care providers will be more likely to make diabetes prevention, treatment and self-management a priority.

Prevention and Public Awareness Initiative Recommendations

Recommendation 1

Expand diabetes primary prevention activities.

Diabetes prevention activities include:

- ***Healthy eating***
- ***Physical activity***
- ***Smoking cessation***
- ***Weight control***
- ***Blood pressure control***
- ***Cholesterol control***

- 1a. Include diabetes prevention and control concepts in the state strategic plans for cardiovascular disease, kidney disease, nutrition, school health, obesity and smoking cessation.***
- 1b. Increase the amount of formal joint funding and number of contractual agreements between the MDPCP and other statewide and regional health promotion efforts.***
- 1c. Increase the number of schools that provide diabetes prevention information and, where appropriate, prediabetes education and support.***
- 1d. Improve the response of Michigan health care providers in identifying, appropriately treating and referring individuals with prediabetes.***

Impact statement

"The evidence is clear and compelling that type 2 diabetes can be prevented or delayed through lifestyle approaches. It is only in the effective translation of the scientific findings into community health and clinical practice that primary prevention of type 2 diabetes will be achieved at the necessary level to halt this epidemic."

Diabetes Outreach Network Directors

Recommendation 2

Develop an ongoing diabetes public awareness campaign.

The campaign should especially focus on ***increasing diabetes prevention and self-management strategies***. Diabetes professionals and consumers should define the messages in the campaign and ensure that they are consistent with those developed by the National Diabetes Education Program (NDEP).

2a. Include a core set of facts about diabetes that every person should know:

- That type 2 diabetes can often be prevented (see page 18 for details).
- The seriousness of diabetes and the benefits of early detection and intervention.
- The nature and course of diabetes and how it can be self-managed.
- The importance of preventing complications.
- The resources and services that are available for prevention and self-management.

2b. Use multiple channels to disseminate information about diabetes. These could include:

- Diabetes-related Web sites: Michigan Diabetes Outreach Network, Michigan Department of Community Health, Michigan Public Health Institute and American Diabetes Association
- Mass media
- Grassroots organizations
- Support groups
- Work site health programs
- Diabetes self-management training programs
- Michigan Association of Health Plans: Taking On Diabetes in Michigan
- Michigan Model for Comprehensive School Health Education
- The Governor's Council on Physical Fitness, Health, and Sports
- Joining People with Diabetes
- Juvenile Diabetes Research Foundation
- American Diabetes Association
- *Statewide Diabetes Resource Directory* (see recommendation #3)

Impact Statement

By joining with the federal diabetes public awareness campaign, statewide partners will be able to provide Michigan with the kind of high-quality materials needed to raise public awareness. Enhanced public awareness will result in (1) an increase in the prevention of diabetes among those at-risk and (2) the prevention or delay of complications in those with diabetes.

“High blood pressure and diabetes are the two most common illnesses in this country. Both are silent for years while their complications pile up. However, the country has faced hypertension squarely, detects it regularly and treats it vigorously after detection. None of these achievements has been accomplished with diabetes and it will be a long time before they are.”

**Roland G. Hiss, M.D., Michigan Diabetes Research and Training Center;
Member, National Diabetes Education Program Steering Committee**

Recommendation 3

Maintain a Statewide Diabetes Resource Directory on the MDON Web site.

- 3a. Ensure that information and resources for consumers and health care professionals are periodically posted and updated.***
- 3b. Widely publicize the Statewide Diabetes Resource Directory* (see recommendation #2).**
- 3c. Distribute printed copies of the directory to reach all communities, particularly those that are economically disadvantaged or do not have easy access to the Internet.***

Impact Statement

Accurate, consistent, targeted and accessible information is a necessary prerequisite to successfully translating the science of diabetes into the kind of care and self-management practices that have been shown to reduce the morbidity and mortality of diabetes.

“What we know about diabetes is often sufficient to prevent it in many who are at risk and to avoid or delay complications for those who have it. It is crucial that this information consistently finds its way to the consumer in an effective, up-to-date and easily- understood manner.”

**Gail Campana, M.A.
Director of Education/Communications
Michigan Association of Health Plans**

Recommendation 4

Develop a statewide diabetes consumer advisory group.

Diabetes is a chronic disease with a course largely determined by the daily self-management activities of people with the disease as well as their support networks, collectively known as “consumers.” Consumers are an invaluable yet untapped resource that can be used to promote the benefits of increased diabetes self-management. Given the proper guidance, consumers can become excellent supporters of each other in their life-long pursuit of diabetes self-management.

Once organized, people with diabetes can serve as credible and potent advocates for improvements in long-term self-management as well as diabetes policy. People with diabetes can offer indispensable feedback regarding Michigan’s diabetes resources and policies -- how effective they are at reaching people with diabetes on a practical level. Furthermore, consumers can recommend necessary changes in Michigan’s diabetes resources and resource distribution to help improve long-term self-management outcomes.

4a. Assemble partners to organize consumer-based support and advocacy activities.

4b. Implement ongoing support and advocacy activities including at least the following:

- Peer education.
- Mentoring.
- Diabetes support groups.
- Advocacy and support for: favorable policies and legislation; improved health provider quality; and increased access to medical care, supplies and education.
- Increased public awareness, prevention and improved self-management by and for people with diabetes.

Impact Statement

Diabetes is generally thought to be a 95% self-care, chronic disease. It is the person with diabetes who largely determines the outcome of the disease. It is the highly individualized self-care applied on a daily basis which makes the biggest difference, (e.g., meal planning, exercise, medications, injections, blood glucose monitoring) in preventing or delaying diabetic complications. It follows that direct involvement of people with diabetes and their circle of supporters can make a positive impact on long-term diabetes control. The literature is replete with examples of the effectiveness of direct involvement of the consumer in public health initiatives. For examples, note the successes of groups like Mothers Against Drunk Driving (MADD), Association for the Advancement of Retired People (AARP) and Alcoholics Anonymous (AA).¹

"Ninety-five percent of the total care of diabetes is self-care ... the involvement of the people with diabetes in care planning and management enhances care, heightens public awareness and promotes social and political advocacy."

From the Vision Statement of Joining People with Diabetes, 6/5/02

¹ For further information, find a brief review of research on self-help/support groups in *Self-Help and Support Groups* by Linda Kurtz, Sage Publications, 1997, pp. 12-16.

Advocacy and Policy

Introduction and Statement of Problem

The Michigan Diabetes Policy and Advisory Council (DPAC) was established over 20 years ago to “advise, guide, and support the Michigan Diabetes Prevention and Control Program (MDPCP).” The structure of DPAC has changed since its inception. Because of the increasing burden of diabetes in Michigan, DPAC requires additional changes and continuing evolution. DPAC has been particularly limited in providing leadership in the diabetes advocacy and policy arena. Its large membership size and lack of appropriate and consistent representation from key organizations and groups contributes to its ineffectiveness. A new structure could empower DPAC to advocate for policies that more adequately serve people with diabetes.

In addition to the restructuring of DPAC, two additional overarching changes are needed in Michigan’s diabetes policies in the 21st century: (1) providing access to care for persons with diabetes and (2) effectively serving disparate populations. These two issues are so central to diabetes care that they must be addressed in any new comprehensive diabetes policy/advocacy endeavor. Persons with diabetes often cannot access diabetes services or obtain necessary supplies because they lack health insurance. It has been shown that being uninsured reduces the likelihood of receiving needed medical care by 50%.² Numerous studies and state data (see page 11) show the life-saving and cost-saving potential of proper medical care and self-management. Supporting programs that either give persons with diabetes access to affordable health insurance or that supply ongoing access to care would help reduce the burden of diabetes among Michigan citizens who are uninsured or underinsured.

Certain population groups are more vulnerable to diabetes. Native Americans, African Americans and Hispanic Americans are 2 to 3 times more likely than Caucasians to have diabetes. This disproportionate burden is probably the result of a complex interplay among a variety of physical and psychosocial factors. Programs and organizations committed to the prevention of diabetes and/or its complications must strive to learn more about this interplay. Knowledge about the influence of culture and ethnicity on (1) diabetes causation and (2) receptivity to diabetes services is essential to prevent or treat diabetes. Ensuring the delivery of culturally-relevant diabetes services will improve access and utilization by these vulnerable populations.

²Institute of Medicine. *Coverage Matters: Insurance and Health*. Available at <http://www.iom.edu> and *MAHP Insights*, Michigan Association of Health Plans Newsletter Nov, 2001. (pg. 2).

Advocacy and Policy Recommendations

Recommendation 5

Restructure the advisory council for the state's Diabetes Prevention and Control Program (Diabetes Policy Advisory Council -- DPAC).

5a. To increase DPAC's effectiveness and to broaden the scope of its functions, add at least the following new committees:

- Prevention and Public Awareness
- Advocacy and Policy
- Data and Research
- Training and Programs

5b. Develop and implement a plan for restructuring DPAC.

At a minimum, DPAC membership should include statewide representation from the following organizations/groups:

- Consumers
- Businesses/work sites
- Educational institutions
- Health care agencies
- Health professional organizations
- Advocacy/public affairs groups
- Volunteer/non-profit agencies
- Third party reimbursement organizations, both public and private
- Providers of direct health care
- Public health agencies

5c. Initiate a formal process to monitor and update the state's diabetes strategic plan:

- 1) Update the state's diabetes strategic plan every three to five years
- 2) Monitor the implementation of recommendations in the plan, especially those related to DPAC.

Impact Statement

The review and revision of DPAC would result in:

- The state of Michigan having a unified strategic plan for diabetes prevention and control. This will help prevent fragmentation and duplication of services.
- A unified course for Michigan's response to the burden of diabetes.
- The forging of positive and productive partnerships with a wider array of pertinent, interested persons, agencies and organizations.
- The creation of a communications network to allow timely and effective dissemination of information regarding diabetes legislative action to all interested parties, and response to that information.

"DPAC must become more effective and produce real results if we are to stem the tide of diabetes in Michigan."

James Gutai, M.D., Wayne State University School of Medicine, Morris J. Hood, Jr. Diabetes Center

Recommendation 6

Improve access to diabetes self-management training, supplies and health care.

The long-term goal of this recommendation is to ensure that all citizens with diabetes have access to: (1) health care providers, (2) self-management training and supplies and (3) medications. Significant numbers of people with diabetes, who are *under-insured* and *uninsured*, do not have access to these resources and, consequently, are at much higher risk for developing preventable long-term complications.

"Lack of insurance does not have much meaning until you're the one who does not have it. I'm not looking for a hand out, just a way out."

**DJ Burns
Diabetes Consumer and
Representative, Volunteer Health
Care for the Uninsured**

Organize a private/public partnership (foundation), to secure a funding base to:

- 6a. Fund pilot projects of varied models to prove feasibility and cost-effectiveness for people with diabetes who are underinsured/uninsured beginning October 2004 and continuing annually.***
- 6b. Use outcome evaluation data from the pilot projects to secure increased and ongoing funding of the public/private partnership in order to meet the needs of a larger segment of the underinsured/uninsured population by October 2006.***

Impact Statement

"People with diabetes would have a significantly better chance of reducing the long term complications of their disease if they have medical treatment, self-management training and supplies. We have known for a long time that it's highly feasible and cost-effective to prevent diabetes complications..." "Now, it's time for us to come together to find a creative solution to make it happen."

**Marshall Katz, M.D., Medical Director, Midwest Health Plan
Chair, Medical Directors Committee, Michigan Association of Health Plans**

Recommendation 7

Reduce health disparities among high-risk minority populations.

High-risk minority populations include:

- **African Americans**
- **Native Americans**
- **Arab Americans**
- **Hispanic Americans**
- **Asian Americans**

- 7a. Expand dissemination of surveillance information about at-risk populations to health program, policy and stakeholder associations.***
- 7b. Ensure that annual state allocations for diabetes prevention and control include targeted community efforts to reduce health disparities beginning October 2003.***
- 7c. Develop, in cooperation with state cardiovascular and kidney disease programs, collaborative action plans to reduce health disparities related to these two co-morbid conditions. These plans will be developed by September 2005.***
- 7d. Support and provide assistance to the six Bureau of Primary Health Care (BPHC) community health centers participating in the Health Disparities Diabetes Collaborative Project.***
- 7e. Continue to support local and regional efforts specifically aimed at reducing health disparities.***

Impact statement

"Diabetes and its associated complications disproportionately affect African Americans, Hispanic Americans and Native Americans. At the same time, these groups do not have the same access to adequate medical care, supplies and education. Specific measures should be taken to address this problem."

Kimberlydawn Wisdom, M.D., Surgeon General, State of Michigan

Data and Research

Introduction and Statement of Problem

Michigan has an increasing need to provide “quality” diabetes care in the most “cost-effective” manner. Evidence-based research and translational science provide the basis for determining what comprises quality and cost-effective care. Numerous evidence-based research studies show that people with diabetes and those at risk for developing diabetes frequently do not receive the kind of care they need to prevent complications of diabetes or to prevent/delay the disease. Professional organizations and health care professionals have not come to a unified agreement about what constitutes “quality” diabetes care. Thus, no clinical practice standards have been adopted for the state as a whole.

The proposed Michigan Diabetes Quality of Care and Cost Coalition and Diabetes Research Advisory Consortium will assist in resolving these challenges. The two groups will provide a useful forum for researchers, scientists and other interested parties to come together to promote diabetes care standards and knowledge.

Evidence-based research studies show the economic benefits of providing quality care to people with diabetes. Despite the research, quality diabetes clinical care in Michigan is still lacking. Michigan could save millions of dollars on diabetes complications with proper treatment and self-management (see also page 11). Nationally, diabetes related health care costs account for approximately 15% of each health care dollar. Michigan also spends a significant portion of all health care dollars on diabetes. A need is clearly evident for cost-effective and targeted planning of health care resources for the treatment and prevention of diabetes in Michigan.

To provide guidance and direction to diabetes quality improvement activities and cost-effectiveness goals, the expertise of an epidemiologist is key. Hiring an epidemiologist will further the utilization of evidence-based research and translational science as well as the collection and analysis of aggregate cost data.

Data and Research Recommendations

Recommendation 8

Hire a diabetes epidemiologist.

The epidemiologist will assist in (1) assessing the state's diabetes burden and (2) evaluating the effectiveness of its diabetes programs and projects.

Specifically, the epidemiologist will:

- 8a. Provide consultation to DPAC about the impact of diabetes and serve as a member of both the research consortium and quality of care coalition*** (see also recommendations #9 and #10).
- 8b. Design and conduct evaluation studies of MDPCP projects and programs to ensure that MDPCP goals and objectives are met.***
- 8c. Expand and improve the Michigan diabetes surveillance and quality improvement patient data systems to collect more relevant diabetes incidence, prevalence, health services and behavioral data.***

The epidemiologist will also play a key role in recommendations: 6,7,9,10,12 and 13. The cost of a full-time epidemiologist should be supported by the Centers for Disease Control and Prevention Diabetes Cooperative Agreement (grant) and the Michigan Department of Community Health (state matching funds).

Impact Statement

The epidemiologist will provide scientific surveillance and evidence-based evaluation data necessary to support the implementation of the *Michigan Diabetes Strategic Plan* and to enhance the work of DPAC. It will also help to ensure an objective allocation of resources in the implementation of the plan.

"The expertise of an epidemiologist is essential. The epidemiologist provides credibility to the efforts of the MDPCP by providing a scientific and evidence-based knowledge to the collection and interpretation of data."

**Matt Boulton, M.D., M.P.H.
State Epidemiologist, Director Bureau of Epidemiology**

Recommendation 9

Create a Michigan Diabetes Cost and Quality of Care Coalition.

This coalition will explore and develop a means to collect, evaluate and widely disseminate diabetes cost and quality of care indicator data. MDPCP will form the coalition in 2003 with partners from major health plans, the Michigan Quality Improvement Consortium, hospital and health care providers, Medicaid, business and industry, health care consumer representatives, specialty practice groups and the Michigan Primary Care Association.

The consortium will:

- 9a. Determine clinical indicators to measure diabetes quality of care outcomes for the state.***
- 9b. Establish uniform methods to report data.***
- 9c. Monitor statewide diabetes care using data compiled in aggregate forms.***

Examples of aggregate data include: epidemiologic data, quality and cost of care indicator data, diabetes care data for disparate populations (the under/uninsured, racial/ethnic minority and underserved populations) and data for other populations such as youth with type 2 diabetes.

- 9d. Conduct pilot projects to evaluate the use of diabetes data bases within health care organizations.***

Impact Statement

The coalition will significantly contribute to reducing the cost of diabetes care in Michigan. Health care costs will be lessened through the coalition's assessment of diabetes costs and implementation of cost-effective planning of health care resources for the treatment and prevention of diabetes and diabetes complications.

"The benefit of the Michigan Cost and Quality of Care Coalition cannot be underestimated. The plan brings together vested partners into new coalitions and purpose. This plan is low-tech, low-cost and high impact. This is the future of diabetes and chronic illness public health prevention and treatment policy."

**Douglas N. Henry, M.D., F.A.A.P., Diplomat-American Board of Pediatrics,
College of Human Medicine, Michigan State University**

Recommendation 10

Develop a Diabetes Research Advisory Consortium.

The consortium should be convened by the Michigan Department of Community Health (MDCH) and the Diabetes Policy Advisory Council (DPAC), and will include multiple partners. The consortium will bring together diabetes experts including researchers, health care providers, public health representatives, health insurers and health care consumer representatives. The consortium will provide Michigan with a specific “translational diabetes research agenda” and will develop priority research objectives for the determination and allocation of resources into translatable clinical diabetes research.

10a. Annually review and prioritize evidence-based (translational) diabetes research for the state of Michigan.

10b. Solicit ongoing input from health care researchers.

10c. Promote the existence of the consortium and its research priority agenda among diabetes researchers, health care providers and other relevant parties.

Impact Statement

“It is critical for the MDPCP to create a forum for scientists, researchers and other interested parties to discuss how to translate diabetes research into practice. The opportunity to share information and develop a research agenda for Michigan would promote scientific and collaborative efforts among universities, health care systems, health care providers and others. If this is done, it will significantly improve the quality and cost-effectiveness of diabetes and prediabetes care in Michigan. I cannot think of a more necessary group to meet. We already know what works scientifically. We just need to come together to share our knowledge with each other and with Michigan health care providers.”

**Anders F. Sima, M.D., Ph.D., Morris J. Hood Jr. Diabetes Center,
Wayne State University School of Medicine**

Training and Programs

Introduction and Statement of Problem

Advances in research and technology have contributed to ongoing, significant strides in the treatment and self-management of diabetes. For people with diabetes to benefit fully from these advancements, however, health care providers need to continually update their knowledge base. Individuals with diabetes require access to knowledgeable service providers to ensure effective treatment and self-management of their disease.

Minority populations are disproportionately affected by diabetes and its associated complications. Thus, ensuring a culturally-competent health care workforce is especially crucial in diabetes treatment and care. Michigan can achieve this goal by focusing recruitment efforts towards minority populations and by providing education in cultural competence to all health care providers currently treating people with diabetes.

The Michigan Diabetes Prevention and Control Program (MDPCP) supports a varied array of public, consumer and professional education. These efforts encompass a variety of mediums including, but not limited to the following:

- Independent self-study modules for nurses and dietitians in the principles of diabetes care and emerging topics.
- Technical assistance focusing on diabetes standards of care provided by the Diabetes Outreach Networks to individual medical practices.
- Sponsorship of conferences.
- On-site trainings.
- Regional-based newsletters.
- Diabetes-focused Web sites.

These efforts currently reach a limited audience of health professionals, primarily nurses, some of whom may have repeated exposure. A portion of future programs needs to be geared toward the broader allied health professional group and lay health workers. Michigan should also continue to increase the reach of programs among the nursing and registered dietitian workforce.

Training and Program Recommendations

Recommendation 11

Increase the level of evidence-based clinical knowledge among diabetes service providers.

Existing continuing education of health care professionals and others who serve people with diabetes are largely provided by the Michigan Diabetes Outreach Network and the Michigan Organization of Diabetes Educators. Education is offered through:

- In-services
- Independent self-study modules
- Direct technical assistance
- Conferences
- Newsletters
- Internet programs

Continuing education credits for nursing and dietetics are often awarded. Concurrently, the Diabetes Outreach Networks work with some local colleges and universities to incorporate diabetes education into existing health care professional training programs (e.g., nursing). There is a clear need to increase the reach and scope of these effective educational efforts. Toward this end, Michigan must:

11a. Create a partnership among organizations that provide diabetes continuing education.

11b. Establish a biennial continuing education plan to identify regional and statewide needs and gaps in evidence-based knowledge and practice skills.

This would include directly assessing (1) the needs of the Diabetes Outreach Networks, health care providers and students in university- or college-based health care professional training programs; and (2) sources of regional, state and national data on diabetes clinical indicators (e.g., Michigan Diabetes Outreach Network, Michigan Diabetes Cost and Quality of Care Consortium, Michigan Association of Health Plans, and Health Employer Data Information Set). These efforts would help determine the needs and gaps in evidence-based knowledge and skills among diabetes service providers.

11c. Expand or develop evidence-based continuing education programs that reach all types of health professionals and others serving people with diabetes.

The results of the needs assessment should drive the expansion or development of new continuing education programs. In addition to reaching all health professionals that serve people with diabetes, an effort should be made to reach paraprofessionals, medical assistants and other physician staff that play a key role in providing diabetes care and education. These efforts could be statewide or regionally based, or could target those working in federally-qualified health centers, community health centers, migrant health centers, or the Native American Health Service.

11d. Sponsor physician training on diabetes behavior change and self-management models.

Where possible, this training should be integrated into existing physician continuing education programs. The training content could feature patient-centered models of care, and support the utilization of the chronic care model.

11e. Conduct outcome evaluations of MDPCP-funded, evidence-based continuing education programs.

The results of the biennial needs assessment and the evaluation of findings should be the basis for recommended changes in educational program efforts.

Impact Statement

A biennial professional education program providing continuing education hours/credits to a varied health care provider audience would assist in narrowing/closing the identified gaps and needs in diabetes-specific knowledge and practice skills of care providers.

"Through continuing education, the health care professional maintains non-biased scientific integrity, stays abreast with current guidelines and new developments, and builds expertise that positively impacts health care delivery."

**Terry Roselmond-Moore, R.N., B.S.N., C.D.E., M.P.A.
Manager, Diabetes Center of Foote Hospital**

Recommendation 12

Enable the use of diabetes lay health workers.

While Michigan has a formal diabetes self-management training process identified through state-certified and nationally recognized programs, there are not enough certified diabetes educators (CDE) to meet the continuing educational needs of people with diabetes within the state. It is estimated that 95% of diabetes is managed by the person with diabetes. To effectively manage the disease, people with diabetes need to make consistent changes in their lifestyles and personal behaviors. This often requires an ongoing educational process. Self-management training programs could choose to use lay health workers to assist the programs in meeting the evolving educational needs of people with diabetes. Lay health workers would provide community-based diabetes education in conjunction with participating Diabetes Self-Management Training (DSMT) Programs. Trained lay health workers would be able to assist people with diabetes to achieve ongoing behavioral, psychological and lifestyle changes (particularly in under-served geographic locations where DSMT programs may be inaccessible).

12a. Define the role of diabetes lay health workers.

12b. Establish a format for the initial training of diabetes lay health workers.

Since there are many certified and recognized diabetes training programs within the state, these programs could serve as the educational vehicle for the lay health care worker initial training and provide many ongoing quality assurance benefits. Diabetes lay health worker training could be modeled after similar lay health programs such as the American Heart Association CPR training for lay persons.

12c. Include an ongoing competency component in lay health worker training to ensure that high quality diabetes care is provided.

The quality assurance and organizing agency for the diabetes lay health care worker program could be the American Diabetes Association, MDPCP, or another newly created organization.

12d. Evaluate the effectiveness of lay health workers.

Impact Statement

Diabetes self-management training efforts will be positively impacted by use of trained, competent lay health workers in a variety of community-based settings. Lay health workers will be able to support ongoing behavioral, psychological and lifestyle changes among people with diabetes in underserved communities. Development of a formal evaluation of lay health workers will aid in quantifying the effectiveness of these interventions. It will also help determine the need for improvements in lay health worker initiatives.

"Outpatient training to help people self-manage their diabetes prevents hospitalizations. Every \$1 invested in such training can cut health care costs by up to \$8.76."

Preventing Chronic Diseases: Investing Wisely in Health
U.S. Department of Health and Human Services

Recommendation 13

Provide quality diabetes pregnancy-related care and education to women.

Michigan must ensure that women with diabetes receive quality care before, during and after pregnancy. Toward this end, Michigan should:

13a. Assess diabetes-specific pregnancy and postpartum needs of women with gestational diabetes.

Specifically, MDPCP and DPAC will review methods to identify women with gestational diabetes, provide appropriate treatment and self-management training and monitor postpartum progress (e.g., counseling).

13b. Identify policy, consumer awareness, health professional education and quality assurance mechanisms to ensure that optimal care and education is provided to women with gestational diabetes.

13c. Implement strategies to ensure that health professionals provide optimal preconception care and education to women with diabetes.

Impact statement

"When a woman receives the diagnosis of gestational diabetes mellitus, she needs to be told that her risk for diabetes when not pregnant is significant. After pregnancy, she may reduce this diabetes risk by improving her diet, reducing excess weight and by regular exercise."

**J. David Faichney, M.D., F.A.C.P., Medical Director
Center for Diabetes and Endocrinology
Saint Mary's Mercy Medical Center**

Recommendation 14

Increase the number of ethnically-diverse and culturally-competent diabetes health care providers.

Michigan's ability to meet the health care needs of people with diabetes depends on its ability to attract, train and retain dedicated health professionals. This is particularly evident in the area of nursing, as it is estimated that 75% of all hospital personnel vacancies are for nurses. By 2010, Michigan is projected to have a significant shortfall of nurses. With the increases in disparate populations in Michigan, those trained in the health care arena must be representative of Michigan's population distribution. In addition, Michigan must ensure that current health care providers deliver health care in a culturally-sensitive manner.

14a. Increase the number of nurses from diverse backgrounds in diabetes health care settings by collaborating with existing initiatives. Examples of these initiatives are:

- Governor Granholm's task force to increase health care workers
- The Johnson & Johnson Campaign for Nursing's Future
- The Michigan Health Council *Be a Nurse Now* Initiative

There are several state and national initiatives focusing on increasing the ethnic diversity among newly trained health professionals. In order to increase the number of bilingual and multi-cultural health care providers who provide culturally-sensitive health care to people with diabetes, the MDPCP and its partners should link with these initiatives. By doing so, they can raise awareness of the initiatives and identify resources to support them. Furthermore, the MDPCP and its partners can also encourage mentorship opportunities for newly-trained, ethnic and minority health professionals to specialize in diabetes care and education.

14b. Expand cultural and diversity training for all health care workers involved in diabetes care and education.

Impact Statement

The health care workforce in Michigan will include professional and paraprofessionals that are representative of the ethnically-diverse population of the state or region in which they are employed. In addition, all health care providers will possess the knowledge and skills needed to provide culturally-sensitive health care to people with diabetes.

"Health care experts make a clear connection between culturally competent health care services and improvements in patient outcomes and cost-effective health care delivery. Michigan's framework of practical approaches to culturally-competent diabetes care will significantly improve the quality of care for the growing multicultural population and reduce the financial burden of diabetes."

**Terry Roselmond-Moore, R.N., B.S.N., C.D.E., M.P.A.
Manager, Diabetes Center of Foote Hospital**

B. Strategic Plan Partners

Recommendation	Partners Involved
<p>1. Expand diabetes primary prevention activities.</p> <p>1a. State strategic plans 1b. Health promotion funding/contracts 1c. School prevention efforts 1d. Prediabetes care and education</p>	<ul style="list-style-type: none"> • Diabetes Policy Advisory Council (1d) • Michigan Department of Community Health (1a-1b) • Michigan Diabetes Outreach Network (1d) • Michigan Diabetes Prevention and Control Program (1a-1d) • Other organizations involved in primary prevention/health promotion activities
<p>2. Develop an ongoing public awareness campaign.</p> <p>2a. Core set of facts 2b. Dissemination</p>	<ul style="list-style-type: none"> • American Diabetes Association (2a-2b) • Diabetes Policy Advisory Council (2a-2b) • Governor's Council on Physical Fitness, Health and Sports (2b) • Joining People with Diabetes (2a-2b) • Juvenile Diabetes Research Foundation (2a-2b) • Michigan Association of Health Plans (2b) • Michigan Department Community Health (2a-2b) • Michigan Diabetes Outreach Network (2a-2b) • Michigan Diabetes Prevention and Control Program (2a-2b) • Michigan Model for Comprehensive School Health Education (2b) • Michigan Organization of Diabetes Educators (2a-2b) • Michigan Public Health Institute (2b) • National Kidney Foundation of Michigan (2a-2b) • Statewide and/or grassroots groups (2a-2b) • Other public and/or private organizations with a stake in diabetes (2a-2b)
<p>3. Maintain a <i>Statewide Diabetes Resource Directory</i> available on the MDON Web site.</p> <p>3a. Updating Web site 3b. Publicity 3c. Printed copies of directory</p>	<ul style="list-style-type: none"> • American Diabetes Association (3a-3c) • Michigan Diabetes Outreach Network (3a-3c) • Michigan Diabetes Prevention and Control Program (3a-3c) • Michigan Public Health Institute (3a-3c) • Other relevant organizations

Recommendation	Partners Involved
<p>4. Develop a statewide diabetes consumer advisory group.</p> <p>4a. Multiple partners 4b. Support and advocacy activities</p>	<ul style="list-style-type: none"> • American Diabetes Association (4a-4b) • Diabetes Outreach Networks (4a-4b) • Diabetes Policy Advisory Council (4a-4b) • Joining People with Diabetes (4a-4b) • Juvenile Diabetes Research Foundation (4a-4b) • Lions Clubs of Michigan (4a-4b) • Michigan Diabetes Prevention and Control Program (4a-4b) • Michigan Organization of Diabetes Educators (4a-4b) • National Kidney Foundation of Michigan (4a-4b) • Other groups involved in consumer advocacy or support
<p>5. Restructure the advisory council for the state's Diabetes Prevention and Control Program (Diabetes Policy Advisory Council -- DPAC).</p> <p>5a. New committees 5b. Plan to restructure DPAC 5c. Monitoring and updating strategic plan</p>	<ul style="list-style-type: none"> • Diabetes Policy Advisory Council (5a-5c) • Diabetes Policy Advisory Council Co-chairs (5b) • Michigan Diabetes Prevention and Control Program (5a-5c) • Michigan Diabetes Prevention and Control Program Director (5b) • Other relevant parties
<p>6. Ensure that all citizens with diabetes have access to self-management training, supplies and health care.</p> <p>6a. Pilot-projects to prove feasibility 6b. Long-term funding</p>	<ul style="list-style-type: none"> • Diabetes Policy Advisory Council (6a, 6b) • Michigan Diabetes Prevention and Control Program (6a, 6b) • Other appropriate public and private organizations

Recommendation	Partners Involved
<p>7. Reduce health disparities among high-risk, minority populations.</p> <p>7a. Surveillance information 7b. Diabetes allocations 7c. Collaborative action plans 7d. Health Disparities Diabetes Collaborative Project 7e. Local/regional efforts to reduce health disparities</p>	<ul style="list-style-type: none"> • Bureau of Primary Health Care (7d) • Diabetes Outreach Networks (7d) • Henry Ford Health System African American Health Initiative (6e) • Michigan Department of Community Health Cardiovascular Disease Program (7c) • Michigan Department of Community Health Kidney Disease Program (6c) • Michigan Diabetes Prevention and Control Program (7a-7e) • National Kidney Foundation of Michigan "Healthy Hair Starts with a Healthy Body" Program (7e) • Optometric Institute and Clinic of Detroit (7e) • Wayne State University Morris J. Hood Jr. Diabetes Outreach Program (7e) • Other organizations involved in reducing health disparities
<p>8. Hire a diabetes epidemiologist.</p> <p>8a. Consultant to DPAC 8b. Evaluation studies 8c. Patient data systems</p>	<ul style="list-style-type: none"> • Diabetes Policy Advisory Council (8b) • Michigan Diabetes Prevention and Control Program (8a-8c) • Other appropriate parties
<p>9. Create a Michigan Diabetes Cost and Quality of Care Coalition.</p> <p>9a. Clinical indicators 9b. Methods to report data 9c. Aggregate data 9d. Pilot projects</p>	<ul style="list-style-type: none"> • Business and industry representatives (9a-9d) • Diabetes Policy Advisory Council (9a-9d) • Health care consumer representatives (9a-9d) • Hospital and health care providers (9a-9d) • Medicaid (9a-9d) • Michigan Diabetes Prevention and Control Program (9a-9d) • Michigan Primary Care Association (9a-9d) • Michigan Quality Improvement Consortium (9a-9d) • Specialty practice groups (9a-9d) • Other appropriate organizations

Recommendation	Partners Involved
<p>10. Develop a Diabetes Research Advisory Consortium.</p> <p>10a. Annual review and prioritization 10b. Input from health care providers 10c. Promotion of consortium</p>	<ul style="list-style-type: none"> American Diabetes Association (10a-10b) Diabetes Policy Advisory Council (10a-10b) Joining People with Diabetes (10a-10b) Juvenile Diabetes Research Foundation (10a-10b) Michigan Diabetes Prevention and Control Program (10a-10c) National Kidney Foundation Michigan (10a-10b) University of Michigan Diabetes Research and Training Center (10a-10b) Wayne State University Morris J. Hood Jr. Diabetes Center (10a-10b) Other appropriate parties
<p>11. Increase the level of evidence-based clinical knowledge among diabetes service providers.</p> <p>11a. Continuing education partnership 11b. Biennial continuing education plan 11c. Expansion of evidence-based continuing education programs 11d. Physician-training 11e. Outcome evaluations</p>	<ul style="list-style-type: none"> Diabetes Policy Advisory Council (11e) Michigan Diabetes Outreach Network (11a-11d) Michigan Diabetes Prevention and Control Program (11a-11e) Michigan Organization of Diabetes Educators (11a-11d) National, state or private organizations providing continuing health professional education (e.g., pharmaceutical companies, hospitals) (11a-11d) State medical organizations (11c) Other appropriate organizations
<p>12. Enable the use of diabetes lay health workers in Michigan.</p> <p>12a. Role of diabetes lay health workers 12b. Initial training 12c. Ongoing training 12d. Evaluation</p>	<ul style="list-style-type: none"> American Diabetes Association (12b-12c) Diabetes Policy Advisory Council (12a-12d) Michigan Diabetes Outreach Network (12a-12c) Michigan Diabetes Prevention and Control Program (12a-12d) Michigan Organization of Diabetes Educators (12a-12d) Other appropriate organizations

Recommendation	Partners Involved
<p>13. Provide quality diabetes pregnancy-related care and education to women.</p> <p>13a. Needs assessment 13b. Gestational diabetes care and education 13c. Pre-conception care and education</p>	<ul style="list-style-type: none"> • Diabetes Policy Advisory Council (13a-13c) • Health professional organizations (13b-13c) • Michigan Diabetes Prevention and Control Program (13a-13c) • Quality improvement organizations (13b-13c) • Other appropriate organizations
<p>14. Increase the number of ethnically-diverse and culturally-competent diabetes health care providers.</p> <p>14a. Nurses 14b. All health care workers</p>	<ul style="list-style-type: none"> • Governor Granholm’s task force to increase health care workers (14a) • Johnson & Johnson (14a) • Michigan Diabetes Outreach Network (14b) • Michigan Diabetes Prevention and Control Program (14a-14b) • Michigan Health Council (14a) • Michigan Organization of Diabetes Educators (14b)

C. Strategic Plan Implementation

The *Michigan Diabetes Strategic Plan* makes key recommendations to be implemented over the next three to five years. At the time of its release in Fall 2003, the MDPCP plans statewide media coverage and a show of unity among all its chronic disease partners and advocates. From September to November 2003, an extended awareness campaign will be launched. The campaign will include dissemination of the plan Executive Summary to diabetes service providers and the general public. In addition, targeted presentations to decision-makers, health experts and community groups will take place. The MDPCP will ensure visibility for the plan and help to prepare diabetes supporters and their partners to begin implementing the plan's recommendations.

A. Priorities for year one:

October, 2003	Key representatives of the Strategic Planning Task Force create and submit plan for the MDPCP to redefine and restructure DPAC as the primary implementation and monitoring vehicle.
October, 2003	DPAC Consumer Advisory Group is established. DPAC Legislative/Policy Affairs Group is formed. DPAC Scientific Advisory Group is assembled. DPAC Training/Program Planning Group is created.
September, 2003 October, 2003	Epidemiologist is hired and assigned as lead staff for Scientific Advisory Group. Kick-off press conference/ DPAC reorganization meeting held.
October, 2003 October, 2003	DPCP makes funding allocations targeting disparate groups. MDPCP/DONs increase involvement with 6 community health centers.
April, 2004	Consumer Advisory Group "plan" to work on public awareness priorities, a resource directory and advocacy is submitted to DPAC/DPCP.
April, 2004	Training/Program Educational Partnership is established, and committee will assess/prioritize further tasks.
April, 2004	A method is implemented to keep DPAC current on state and federal legislative issues.
April, 2004	A means is developed to keep DPAC current on new scientific developments.
June, 2004	A working committee on data and research.
June, 2004 June, 2004	MDPCP expands/disseminates surveillance information on disparate populations. A Private/Public Partnership (Foundation) for funding uninsured is organized.

B. Next Steps:

October, 2004	Next implementation steps to be developed (to be determined by DPAC annual review of progress.)
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